mind we will not be led into a routine treatment of all cases.

JOHN C. WILSON, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Mensor has presented some very convincing arguments to prove that metatarsus varus is an important etiologic factor in the development of hallux valgus deformity. The majority of us are inclined to drop into the pitfall pointed out by Doctor Ely, that shoes must be the important causative factor. It is undoubtedly true that metatarsus varus is a predisposing factor in the development of hallux valgus, but there is some doubt about it being the sole explanation.

Very few cases of hallux valgus in men come under our observation; on the other hand the condition is extremely common in women. We are all aware that shoes for men as they are constructed today follow anatomical lines rather closely, while shoes for women are constructed according to the ideal of Confucius. Whether or not women would develop hallux valgus deformity if they wore shoes resembling those worn by men cannot be stated, but the fact remains that the style of women's shoes will probably not be changed, so therefore it must be considered in both cause and effect.

Too much emphasis cannot be placed upon the inadvisability of operating upon arthritic joints. Infection is disseminated throughout the capsule and soft tissues, resulting in prolonged disability, pain, and swelling. The operative technique in itself is probably not the most important phase in the treatment of hallux valgus. While the Keller operation is preferred, it is safe to say that any operation in vogue will be satisfactory in properly selected cases if the after-treatment is carefully carried out. Restoration of balance between the flexor and extensor muscles of the great toe, and a free range of motion in the great toe joint are essential to the normal gait.

Doctor Mensor deserves great credit for the conciseness and clearness with which this subject has been presented.

BLADDER TUMORS*

By J. C. NEGLEY, M. D.
Los Angeles

DISCUSSION *by Robert V. Day, M.D., Los Angeles; Charles P. Mathé, M.D., San Francisco; William E. Stevens, M.D., San Francisco.*

FOR the unknown factor of etiology many reasons have been presented at various clinics and by research groups throughout the world, but none have been proven, hence a discussion of the etiology of bladder tumors is unnecessary.

PATHOLOGY

Over 90 per cent of bladder tumors are epithelial in origin. The many and varied classifications of these tumors are of academic rather than of practical interest. The urologist must make his prognosis and outline his treatment after a cystoscopic examination. Through this means, the classification of Young of Johns Hopkins may be adopted:

1. Papillomas, single or multiple.

Papillomas have distinct pedicles, many and varied forms and shapes of papillae. Single tumors may be benign or malignant, but multiple ones are almost always malignant.

2. Papillary, non-infiltrating tumors with a tendency to spread laterally.

Lateral spread tumors spring from central papillomas and have a sloping rather than an overhanging edge, ulceration is uncommon and infiltration late.

3. Tumors consisting of intravesical mass with bladder-wall infiltration and ulceration.

Intravesical mass tumors begin as papillomas, but later roll up into mushroom mass with a gray necrotic base which may contain calcareous deposits. Most all these tumors have infiltrated the bladder wall and are generally found on the base of bladder.

4. Entirely infiltrating tumors with little intravesical portion.

Entirely infiltrating or bladder-wall type are uncommon, but extensive with widespread ulceration and contracted bladder.

5. Pedunculated tumors, not infiltrating, not papillary.

Pedunculated tumors not infiltrating, not papillary, are very rare, mostly connective tissue tumors as fibroma, myxoma, sarcoma.

DIAGNOSIS

Generally made with the cystoscope, but in cases where this instrument cannot be used we depend on history, symptoms, small pieces of tumor passed in urine, cystograms and, at times, through cystotomy for other causes. Rectal or vaginal palpation is at times of value.

SYMPTOMS

Unfortunately the same line of symptoms is present in many other conditions and none is pathognomonic. The common ones of aid are hematuria, frequency, pain, burning and difficulty of urination. The hematuria is generally the first to appear, intermittent in type, is given little attention by the patient, and, sad to relate, often as little by the physician. The amount of blood varies from a few drops to enough to exsanguinate the patient or fill his bladder with clots necessitating a cystotomy.

Pain, independent of urination, is a rather late symptom and is due to nerve pressure through infiltration of the bladder wall. Frequency may be present early or late, due to cystitis, irritation of infiltrating growth on nerve ends and lessened capacity. The constitutional symptoms as cachexia, anemia, loss of weight, are not so evident here as in malignancy elsewhere in the body.

METASTASIS

Generally speaking, bladder tumors are slow to metastasize, but with our improved methods of diagnosis and a more careful check of our records this opinion may have to be revised. Judd reports metastases in 21 of 166 deaths that came to autopsy, of which six were in abdominal viscera, four in pelvic bones, two in lungs and two in the groin. These were single instances of patients with metastasis in the abdominal wall, rectum, humerus, regional lymph nodes, lumbar spine, uterus, and retroaortic lymph nodes.

TREATMENT

Many and varied are the methods: some one or other a hobby of one surgeon, while his colleague may use them all in the course of a year or perhaps run the entire gamut on an individual case. Perhaps we owe a great debt to the enthusiast in any one line of treatment, for on him falls the burden and opprobrium if he fails and little

* Read before the Urology Section, California Medical Association, at its Fifty-Sixth Annual Session, April 25-28, 1927.

TABLE 1—*Symptoms and Their Duration*

	Number of Cases	3 Weeks	6 Weeks	2 Months	3 Months	4 Months	5 Months	6 Months	8 Months	9 Months	1 Year	2 Years	3 Years	4 Years	5 Years	Life		
Hematuria	21	1	2	1				5		2	3	2	2		1			
Hematuria, Dysuria and Frequency	36				5	6	5	5	4		6	1	1	1	1	1		
Dysuria and Frequency	25		2	3	4	3		3	2	2	4		1	1				
Pain	8					3				2	3							
No Symptoms	15																	

praise when the mortality rate is lowered and results improved. The most used methods of today are surgical diathermy, radical surgery, radium through open or closed bladder, fulguration through cystoscope, x-ray, the Percy cautery, electrocautery, or a combination of any number of them.

RESULTS

The literature assuring results, as published with reports, grows brighter each year and, in fact, becomes encouraging. Young and Scott report 380 cases from Brady Institute, 27 per cent cured by various methods. They consider surgery too great a risk in extensive growths. They believe 75 per cent of papillomas and 25 per cent of infiltrating carcinomas should be cured by fulguration, radium, or electrocautery. Federoff reports 165 cases. He advises two-stage cystectomy in selected cases, but cites mortality rate 50 to 68 per cent in single-stage cystectomy in 321 collected cases. Deaver and McKinney report 121 cases and believe that when partial resection cannot be done without transplantation of ureters, fulguration or cautery should be used and that ureteral transplant and resection is not justifiable. Squier believes in segmental resection, and cites twenty out of seventy-five patients alive, without recurrence eight to twelve years after operation. Kidd reviews results in 162 collected cases; says death was due to obstruction of ureters, exhaustion, pain, bleeding, and not to spread of tumor. Twenty-six of his cases had malignant papilloma; twelve resisted diathermy; twenty-eight had partial resection, with thirteen cures. Bumpus, in 527 cases from Mayo Clinic, concluded radium alone not successful, but was most beneficial after surgery or fulguration. Radium followed by operation gave poor results. Tumors

TABLE 2—*Results of Treatment*

	Cause of Death										*Alive and Well*					
Kind of Treatment	Dead	Number of Cases Living	No Record	Pneumonia	Metastases to Lung, and Spine or Long Bones	Bilateral Hydronephosis	Uremia	Pulmonary Tuberculosis	Pyelonephritis	Recurrence in the Bladder	1 to 3 Months	3 to 5 Months	5 to 9 Months	9 to 12 Months	1½ Years	2½ Years
1. No Surgery Palliative	10	0	1	2 in 3 wks. 2 in 2 mos.	2 in 3 mos.	3 in 4 mos.										
2. Cystoscopic Fulguration	0	26									11	7	6	1	1	
3. Cystotomy Surgical Diathermy	7	14		1 in 20 days 1 in 4 mos. 1 in 7 mos.			1 in 12 days	1 in 1 mo.	1 in 1 mo. 1 in 2 mos.		3	6	2	1	1	1
4. Cystotomy Percy Cautery	12	1														
5. Cystotomy Electro Cautery	3	3		1 in 1 mo. 1 in 5 mos.						1			3			
6. Cystotomy X-Ray	2	2								2			2			
7. Cystotomy Percy Cautery and X-Ray	4	0								4						
8. Cystotomy Radium and X-Ray	2	1								2		1	not	imp	roved	
9. Resection	2	0	1	Peritonit	is					1 in 2 yrs.						
10. Cystotomy alone	9	5	1	2 mos. 2	6 mos. 1	3 mos. 1	3 w. 1		wks. to 3 mos. 3		(2	2	1)-	No c	hange	
11. X-Ray alone	1									1 yr. 1						

too large for resection were best treated by cautery or surgical diathermy.

In the *Journal of Urology*, February, 1927, Young stated resection should be done where easily accessible tumors are found. In other locations, electrocautery and radium. He applies radium through cystoscope in many cases. Chute of Boston considers bladder tumor treatment results disappointing, and does not believe radium is helping the situation. Bransford Lewis states radical resection sounds well, but is more theoretical than practical when applied to most of our everyday cases. Kretschmer warns of the dangers of embolism and fistula, following diathermy and of extensive fibrosis following radium.

COMMENTS ON ONE HUNDRED AND FIVE CASES

For your consideration is appended a table of 105 cases of tumor of the bladder from the Los Angeles General Hospital.

You will bear in mind that most of our cases are terminal or far advanced, and that in this class of patient an efficient and reliable follow-up history is not easily obtainable.

Pathology—Of the series of 105 tumors ninety-two were papillary carcinoma, twelve scirrhus carcinomas and one sarcoma, twenty were single with one visible pedicle, the remainder were either multiple or had fused to form one large tumor mass. The remainder came in for relief of other urinary pathology, as prostatism, calculi, etc.; and bladder malignancy was discovered in routine examination.

Diagnosis—A diagnosis was made by cystoscope in most cases and, as a rule, a section was not taken through the cystoscope. In all cases having a cystotomy the diagnosis was confirmed by pathological section. Some cases that could not be cystoscoped were diagnosed by cystogram.

Metastases—Ten Cases

Iliac lymph nodes	4
Lumbar spine	3
Lungs	1
Long bones (ribs and femur)	1
Liver, preaortic glands, and sigmoid	1

Results

	Cases	Deaths
1. No active treatment	10	10
2. Closed fulguration	26	0
3. Surgical diathermy	20	7
4. Percy cautery	13	12
5. Electrocautery	6	3
6. X-ray	5	2
7. Percy cautery and x-ray	4	4
8. X-ray and radium	3	2
9. Resection	3	2
10. Cystotomy alone	14	9
11. X-ray alone	1	1
	105	52

Cases 3, 4, 5, 6, 7, 8, 10, also had cystotomy.

SUMMARY AND CONCLUSIONS

Age: The youngest was 20 and had a sarcoma. Bladder tumors occur most frequently between the ages of 60 and 70; next between 50 and 60; and closely following this decade, with only a difference of four, is that of 40 to 50. Sex shows a preponderance of males, probably because they come oftener to the urologist for cystoscopic examination. If women with bladder symptoms were cystoscoped more frequently perhaps more bladder tumors would be discovered. Methods of treatment in this series of cases at least seem to favor fulguration or surgical diathermy, either through a closed or open bladder. All of those having cystoscopic fulguration, to say the least, had less discomfort and loss of time than those having x-ray or treatment through the open bladder.

My observation has been that large size and apparent malignancy should not deter one from using fulguration through cystoscope, for many of those here recorded had reached generous size. Surgical diathermy through the open bladder causes the patient comparatively little discomfort and pain. There seems to be only slight tendency to fibrosis, thus making the dreaded hydronephrosis a less frequent complication. As to the other methods used in this series, the Percy cautery, electrocautery, x-ray, radium, resection, or a combination of any number of them; there is not a sufficient number to speak authoritatively. Also most of the cases treated by the latter methods were terminal ones in which no form of treatment was thought of benefit.

The Percy cautery has advantage in that there is but little postoperative suffering; the technique is not complicated and if used early enough the cures should be as many as by other methods. Disadvantages are the danger of fistula, quite marked fibrotic changes which seem to predispose to hydronephrosis and the large amount of absorption from the burned area.

X-ray seems to cause a great deal of suffering and fibrosis. Radium is awkward and inaccurate when used through the cystoscope (unless needles are implanted in the mass). These are often in the care of radium clinics, where the workers are little versed in cystoscopic pathology and technique. Vice versa, the trained cystoscopist is little versed in the knowledge and use of radium. Better cooperation between radium clinics and urologists would enhance favorable results (or more complete recoveries). Radium does cause pain, suffering, and a great deal of fibrosis. Resection with the cautery knife of that part of the bladder wall containing the tumor mass, where it is easily accessible, would seem to be an ideal method, but the operation of total cystectomy, with cold knife or cautery carries too high a mortality rate to be justifiable in more than a few selected cases, but when resection is done by any method it should be preceded by ureter transplantation. When both operations are performed at the same time the mortality rate becomes too high to make it justifiable.

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DISCUSSION

ROBERT V. DAY, M. D. (412 West Sixth Street, Los Angeles)—I have listened with a great deal of interest to Doctor Negley's paper on bladder tumors. His classification, diagnostic methods employed and technique of treatment are comprehensive.

This much may be stressed, viz.: that slightly over 50 per cent of all bladder tumors at the moment of

the first cystoscopic examination are benign papillomas, all potentially malignant and sure to become malignant if untreated, improperly treated or neglected, and yet susceptible in almost every instance of a cure by high frequency methods through a cystoscope. Of the remaining 45 per cent at least four-fifths could have been easily diagnosed at the start, when they could have been readily cured by high frequency methods if the clinical signs of bladder tumor had been heeded and a cystoscopic examination made. In other words over 90 per cent of bladder tumors are clinically benign papillomata when the first symptoms begin and may be cured if the practitioner will simply heed ordinary clinical warnings and have the patient cystoscoped by a reliable urologist when these first symptoms appear. In actual practice, however, dilatory methods and procrastination with simple medical treatment without proper examination are much too frequently employed; and patient is given medicine by mouth and told that his hematuria will probably cease and he needn't worry about it. Usually the hematuria does cease temporarily or for a long period under any form of treatment or without any treatment, and then both the patient and the physician develop a false sense of security. One of the most valuable lessons to be learned in the practice of medicine is that, with the single exception of a terminal hematuria from a posterior urethritis or prostatitis of a gonococcic nature, hematuria always means organic disease or organic change somewhere in the genitourinary tract. Many a case has become hopeless simply because of delayed diagnosis and, in consequence, of delayed or inadequate treatment. Obtaining specimens of the tumor through the cystoscope for microscopic section should be done when feasible and is not contraindicated. Furthermore typing the tumor according to the classification of Broders is often invaluable from a standpoint of prognosis, of future management and for statistical purposes. Unfortunately for most of us about 50 per cent of bladder tumors observed clinically are already definitely malignant and far advanced. In this class of case the outlook is discouraging and the experience of most of us including that of the very largest clinics, is that whatever we do, not more than 5 per cent are cured. The effort is not entirely lost because most of the methods of treatment (except the reckless use of x-ray and radium) are palliative. Since over 90 per cent can readily be diagnosed while still curable by the application of high frequency current through a cystoscope, often reinforced by radium application through the cystoscope, the real promise of cure is an adequate and immediate cystoscopic examination of every case of hematuria except terminal hematuria from acute gonorrhea, and also adequate and prompt urological examination of patients with dysuria and urinary infection.

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CHARLES P. MATHÉ, M. D. (844 Phelan Building, San Francisco)—Doctor Negley's timely paper on bladder tumors is a distinct contribution to the literature and adds to the statistical collection of cases presenting these lesions. It is apparent that statistics such as these collected from the various hospitals throughout the country will in the aggregate give us valuable information as to the management of vesical neoplasms. Eighty-five per cent of the cases reported showed symptoms, the most frequent of which were hematuria, dysuria and frequency of micturition. Early cystoscopic examination of patients presenting the clinical syndrome of hematuria and difficulty in urination is the only accurate way of demonstrating a bladder tumor, be it early or late. Relief of the tumor is more likely to be obtained if the diagnosis is made early. It behooves the internist and general practitioner to realize the importance of hematuria and the possibility of malignancy being the etiologic cause and to advise the patient to have an early diagnosis by cystoscopic examination.

The treatment of bladder tumors calls for intelligent use of the various present-day methods at our command. Papillomata are always potentially malignant, but when detected early they can often be entirely destroyed by the use of the high frequency electrocautery through the cystoscope. Early cases of carcinoma are often amenable to radical surgical removal of the tumor including a fairly large margin of healthy bladder wall. In advanced cases the prognosis is exceedingly poor. The occasional good result and the frequent amelioration of symptoms, however, warrants the use of radium, deep x-ray therapy, chemiotherapy, and diathermy through the open bladder. Dr. J. Walker considers all bladder papillomas as malignant, and at the recent meeting of the western branch of the American Urological Association held in Seattle, July 7, 1927, denounced the common practice of fulguration as the treatment of these tumors and in its place advises the use of diathermy through the open bladder. In rather advanced cases which are complicated by fistula formation and bilateral hydronephrosis deviation of the urinary stream is a good palliative procedure. It not only does away with continual incontinence of urine, but alleviates actual pain and relieves the back pressure into the kidneys. I have recently had two such patients in which transplantation of the ureter into the skin of the inguinal region afforded considerable comfort and amelioration of the symptoms.

The poor results tabulated in Doctor Negley's paper emphasize our inability to meet the problem of bladder cancer. The occasional good result, however, consisting of an actual cure, warrants the energetic use of the various methods of treatment at our command. I recall a patient, a man in active business in San Francisco, suffering from carcinoma solidum of the bladder who is still living five years after complete surgical excision, also a patient who was relieved of an early malignant papilloma by electrocautery. At the present time our only hope of coping with bladder tumors seems to be through early diagnosis, and it behooves the general practitioner to realize the importance of hematuria, particularly when it occurs in a person of the cancer age.

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WILLIAM E. STEVENS, M. D. (870 Market Street, San Francisco)—Doctor Negley has condensed into comparatively few words a great deal of interest and value concerning tumors of the bladder.

His classification is concise, and fully covers the types of growths that we usually encounter.

Although hematuria, often unaccompanied by pain, is the most common symptom of this condition, its significance is often overlooked. Notwithstanding the emphasis that has so frequently been placed on the necessity for complete urologic investigation in the presence of hematuria, many patients receive instead a little urotropin or other medicine; and if, as so often happens, the blood disappears temporarily from the urine, they are discharged as cured. Bleeding may not occur again until the growth is far advanced. The poor results obtained in Doctor Negley's series of cases is largely due to the advanced stage of the lesions coming under his observation.

I have found cystography a valuable method of diagnosis when satisfactory cystoscopy is impossible.

I cystoscope as many women as men and find about the same number of bladder growths in both sexes.

In my experience the best results have been obtained in the treatment of the apparently benign pedunculated papillomata by means of fulguration through the operating cystoscope. Partial resection has proven most useful in the treatment of malignant growths not involving the base of the bladder. When the latter is involved surgical diathermy has been of great value in several of my cases. I believe that this is destined to become the most popular method of treatment for malignant tumors of the bladder.

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DOCTOR NEGLEY (closing)—In closing I wish to thank my confrères for their discussion of this paper. Doctor Mathé and Doctor Stevens both stress the poor results obtained in this series of cases. For-

tunately Doctor Day has answered this criticism better than I could in the following quotation: "About 50 per cent of bladder tumors observed clinically are already definitely malignant and far advanced. In this class of cases the outlook is discouraging, and the experience of most of us, including that of the very largest clinics, is that, whatever we do, not more than 5 per cent are cured." Since this can readily be supported by a search of the literature and statistics, I still feel that the results obtained by us were not poor but compare favorably with those of other clinics, and rest assured that, although the results may seem poor, at least they represent the results as found, uncolored by bias against or enthusiasm toward any one method of treatment. Doctor Mathé quotes Doctor Walker of Seattle as substituting surgical diathermy through the open bladder for cystoscopic fulguration. I hardly believe such a formidable, time-consuming, expensive, discomfort-producing procedure is to be preferred over simple cystoscopic fulguration in those tumors that are small and of a relative low degree of malignancy. The writer and all the discussers have again emphasized the apparent apathy on the part of the profession at large regarding hematuria. Notwithstanding the stress placed upon the importance of this symptom, the urologist is still called in, time and again, to diagnose a case that has had hematuria over a long period of time only to find an inoperable malignancy which might have been cured if diagnosed in the early stages. It is possible that the medical journals by some timely editorials or other timely articles might be able to waken the profession to the necessity of a thorough examination on all cases of hematuria of unknown origin.

INTRACRANIAL HEMORRHAGE IN THE NEWBORN *

WITH REPORT OF SIX CASES

By MORRIS H. SILVERBERG, M. D.
San Francisco

DISCUSSION *by L. I. Breitstein, M.D., San Francisco; John W. Sherrick, M.D., Oakland; John C. Dement, M.D., San Diego.*

INTRACRANIAL hemorrhage in the newborn is the most frequent and fatal injury of childbirth. The incidence is high ranging from 5 to 15 per cent, with a mortality of from 40 to 50 per cent. Reports on autopsies in deaths from all causes in the newborn by Ehrenfest,[1] Holland,[2] and Saenger,[3] show gross intracranial hemorrhages in from 40 to 50 per cent, with the greatest number having occurred in prematures and breech extractions.

At Mount Zion Hospital during the year from July 1, 1925, to July 1, 1926, in 138 clinic cases delivered on the obstetrical service, we had an incidence of 4.3 per cent. This incidence is quite low, but several babies having no symptoms may have been overlooked in this series, as spinal punctures were not done. Sharpe [4] and McClaire, in a study of spinal fluids in a series of 500 cases from twelve to twenty-four hours after birth, showed an incidence of 9 per cent. M. H. Roberts [5] in his recent study of spinal fluids taken during the first twelve hours after birth, in over 400 cases showed an incidence of intracranial hemorrhage of 14.1 per cent, with only 6 per cent presenting symptoms.

CAUSES

Intracranial hemorrhage in the newborn may occur during or after normal labors, only exhibiting symptoms in the severe cases. It is frequently overlooked.

The chief cause is trauma. The main predisposing causes are:

1. Prematurity of the infant, which renders it more sensitive to trauma, so that normal labors may be sufficient to cause hemorrhage.

2. Breech extraction, in which rapid or forceful delivery of the after-coming head produces the injury.

3. Precipitate labors, where there is sudden compression of the head.

4. Very difficult or prolonged labors, where there is excessive molding of the head with injury.

5. Instrumental deliveries.

Premature infants and breech deliveries show the greatest incidence. Where sudden compression of the head or sudden release of the pressure occurs hemorrhage is frequently the result.

The most frequent site of hemorrhage is in the free margin of the tentorium (usually at the juncture with the falx cerebri) with resulting rupture of the venous sinuses. Beneke,[6] in his method of autopsy, has shown the tentorium lacerated in supra- and infratentorial hemorrhages. Hemorrhage occurs whenever meninges are torn, but it may occur in the brain substance proper, and within the ventricles. There may be no symptoms and the intracranial hemorrhage may be overlooked.

DIAGNOSIS, SYMPTOMS, AND TREATMENT

The diagnosis is readily made when the newborn shows drowsiness, stupor, cyanosis, difficult breathing, focal signs as twitchings, poor tissue turgor, refusal to nurse, and the general symptoms of increased intracranial pressure, as separation and bulging of the cranial sutures and the fontanelles and tonic or clonic convulsions. Early lumbar puncture is an accurate means of diagnosis. The coagulation time and bleeding time should be done immediately after delivery in all cases of difficult labors or suspected hemorrhage. The coagulation time in normal newborn babies is from five to nine minutes with an average of seven minutes. The bleeding time is from two to five minutes with an average of three and one-half minutes. Increased coagulation time or hemorrhagic disease of the newborn is one of the chief contributory factors in serious intracranial hemorrhages.

The treatment is essentially one of prevention. Special precautions in breech extraction, gently hastening difficult or prolonged labors, and careful, slow instrumental deliveries will help in decreasing the incidence. Rotating prolonged occiput posterior positions manually or with the Kjelland forceps if possible and doing episiotomies are prophylactic measures. Cesarean sections should be done in those cases in which the head will not

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* From the Obstetrical Service of Mount Zion Hospital.

* Read before the San Francisco County Medical Society, September 21, 1926.